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What is claimed is:

1. A disposable cartridge for use in an extracorporeal blood perfusion system having a cardiopulmonary circuit for receiving venous blood from a patient, oxygenating the blood and returning the oxygenated blood to the patient, a cardioplegia circuit for delivering a cardioplegia solution to the patient, and a suction circuit for withdrawing blood or fluids from the patient or surgical site, the perfusion system having a control unit for controlling the flow of fluids in one or more of the circuits, the disposable cartridge comprising:
- 10 a housing defining a plurality of internal passageways, a first internal passageway being configured for connection to the cardiopulmonary circuit, a second internal passageway being configured for connection to the cardioplegia circuit and a third internal passageway being configured for connection to the suction circuit.
- 15 2. The disposable cartridge of claim 1 further comprising:
a filter configured for filtering fluid flowing through at least one of the plurality of internal passageways.
- 20 3. The disposable cartridge of claim 1,further comprising:
a bubble trap configured for removing bubbles from fluid in at least one of the plurality of internal passageways.
- 25 4. The disposable cartridge of claim 1 wherein the housing comprises a first rigid portion connected to a second flexible portion.
5. The disposable cartridge of claim 4 wherein the first portion comprises a translucent material configured to allow viewing of fluid in the internal passageways.

6. The disposable cartridge of claim 1 further comprising at least one valve interconnected to at least two of the plurality of internal passageways, the valve being configured for selectively preventing fluid flow in at least one of the plurality of internal passageways.

7. The disposable cartridge of claim 1 wherein the housing defines a plurality of fluid inlet ports and outlet ports.

8. The disposable cartridge of claim 1 wherein the housing further defines an internal reservoir fluidly connected to at least one of the internal passageways.

9. The disposable cartridge of claim 1 further comprising a sample port configured for withdrawing a fluid sample from at least one of the plurality of internal passageways.

10. The disposable cartridge of claim 4 wherein the control unit of the perfusion system includes at least one fluid pressure sensor and wherein the disposable cartridge further includes at least one pressure sensing station connected to at least one of the plurality of internal passageways, the pressure sensing station being configured to interface with the pressure sensor on the control unit through the flexible portion of the housing.